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TECHNICAL ASSISTANCE TO POWER SECTOR, EGYPT

TAPS CONTRACT FINAL REPORT
INCLUDING DELIVERABLES

November 30, 2005

This publication was produced for review by the United States Agency for International Development. It was prepared by International Resources Group (IRG).

TECHNICAL ASSISTANCE TO POWER SECTOR, EGYPT

TAPS CONTRACT FINAL REPORT
INCLUDING DELIVERABLES

USAID Contract GS 10F-0067M, Order No: 263-M-00-05-00016-00

Reporting Period: May 9 - November 30, 2005



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The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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OVERVIEW

The TAPS contract was awarded to IRG on May 9, 2005. TAPS was a continuation of work performed under two previous USAID-sponsored projects, namely the Egyptian Electricity Regulatory Project (EERP) and the Electricity Regulatory Agency Consulting Services Project (ERACS). The ERACS Maadi office was permanently closed on April 30 and the new TAPS project office, within the Agency's offices, was fully operational on the same date. All TAPS long and short term personnel spent virtually 100% of their time in the Agency's offices.

CONTRACT OVERVIEW

Please note that the final (sixth) TAPS Monthly Report was issued on November 7, 2005 as all IRG personnel except the Administrative Officer had left Egypt by that date. However, additional work was performed after that date, the details of which are included herein.

The purpose of this Report is to provide a summary and details of the Project purpose, objectives and accomplishments on a Task/Milestone basis. This Project was authorized under USAID Contract No.: GS-10F-0067M, Order No.: 263-M-00-05-00016-00, Technical Assistance to Power Sector in Egypt (TAPS), as dictated by the final revision of the Work Plan, included herein as Enclosure 1.

From October 2003 to the end of April 2005 (which included a 30-day no-cost extension mandated by USAID), International Resources Group, Ltd (IRG) was under contract to the US Agency for International Development (USAID) to provide consulting services to the Egyptian Electric Utility and Consumer Protection Regulatory Agency, known hereafter simply as the Agency. That contract, called ERACS, was a continuation of such services first provided by the Egyptian Electricity Regulatory Project (EERP) from late 2001 to early 2003. IRG work on the TAPS project commenced on May 9, 2005 and ended on November 30, 2005.

The TAPS Project, addressed herein, was designed to achieve the Tasks/Milestones delineated in the Project Work Plan for continued support of USAID/Egypt's Special Objective No. 18, Access to Sustainable Utility Services, and Intermediate Results associated therewith.

The TAPS Project was conducted under a firm fixed price, Milestone Contract, with each of the six Milestones associated with a Milestone Payment to be made upon Agency concurrence with completion. For the sake of simplicity, Tasks/Milestones are referred to simply as Tasks in this Final Report. To date, all Milestones have been completed by IRG. The Agency has advised that it has an unidentified question remaining on Milestone 2; IRG awaits further clarification of the Agency's question so that IRG may address it and concurrence with this final Milestone granted. Each Task is addressed in more detail later in this report.

IRG's Team that carried out the six-month long TAPS Project was virtually identical to the team that carried out the earlier ERACS Project where one long-term Chief of Party (COP) was supported by a long term Deputy COP (DCOP) and a long term Administrative Officer, augmented by a team of short-term Egyptian and US experts (Appendix B).

- ◆ The COP was Mr. Russell C. Brown of International Resources Group (IRG). Mr. Brown has over 30 years experience in the electric utility, power generation and nuclear industries. Since 1991, he has provided his knowledge and assistance in electric sector regulation, restructuring and privatization to Hungary, Poland, Slovakia, the Czech Republic, Romania, Bulgaria, Egypt, Montenegro and India as well as in the US. Mr. Brown worked with the Agency extensively during the EERP Project to develop model licenses controlling market access and to provide an information platform for the

Agency. Mr. Brown relocated to Cairo and was available full time for the duration of both ERACS and TAPS.

- ◆ Mr. Robert Taylor, a regulatory attorney with over 23 years of commercial law and electricity sector experience in Europe, Central Asia and Africa, was the DCOP and Resident Advisor for the entire ERACS Project and for the first two months of TAPS, based in Cairo.
- ◆ Ms. Luna Luther, an Egyptian national, was the Administrative Officer and has served been in similar positions on IRG projects in Egypt since 1996.

The IRG Cairo Team for ERACS was supported by Ms. Margaret McKay, the IRG home office Program Manager located in Washington, DC. For TAPS, Dr. Charles Ebinger assumed the role of IRG Home Office Program Manager. Additional Home Office support for both projects was provided by Ms. Ashley Shattles as Project Administrator and various personnel from other functions such as Contracts, Accounting and IT.

The TAPS COP issued Monthly Reports that provided details of the status of ongoing work tasks/activities, project accomplishments, milestones achieved, future planned work, meetings held/attended and any important issues and problems. The Monthly Reports are stand-alone documents that include all consultant's Trip Reports, deliverables, other work products, plans and schedules, letters, invoices, etc., as Attachments thereto.

This Report and the Quarterly Reports issued by the COP are intended to be a synopsis of the more detailed, stand-alone Monthly Reports.

THE EGYPTIAN POWER SECTOR, THE AGENCY'S CONTEXT

The Egyptian electricity sector is currently comprised of 15 separate government-owned companies, all under the control and ownership of the MEE via the Egyptian Electricity Holding Company (EEHC), and several privately owned entities, including three BOOTs, three private, vertically integrated electric companies located at the Red Sea and three private generation/distribution utility companies connected to the national grid in the Cairo and Alexandria areas.

At the present time the Government (i.e., the State Council) controls all aspects of tariff setting. Selected tariffs were increased for the first time in over 10 years in October 2004. Tariff increases of 5% for all customers have been mandated for each October for the next 5 years. However, these will not be enough to allow full cost recovery as the yearly inflation rate exceeds 5%. These recent and ongoing tariff increases were/are very important occurrences as they: (1) indicate the recognition of the GoE of the importance of tariffs covering all utilities' costs; and (2) indicate that the GoE has the "political will" to increase tariffs.

EEUCPRA

The Agency was first established as the Egyptian Electric Utility and Consumer Protection Regulatory Agency (EEUCPRA) in 2000 by Presidential Decree No. 339/2000. Dr. Mohamed Salah El Sobki, Jr., was appointed Managing Director and fills that position to this day. During the duration of the EERP, ERACS and TAPS Projects, Dr. Sobki was adding and training (with the assistance of IRG) his staff. At the present time, the Agency staff numbers approximately 50 people with a total complement of 60-70 people to be reached in the coming months. Appendix A shows the current organization of the Agency.

The Agency operates under the purview of a Board of Directors, which has ten members. One member was replaced recently. The other nine have been on the Board since its inception and were recently approved for another term. The Board is chaired by the Minister of Electricity and Energy (MEE), Dr. Hassan Younis.

The Agency's accomplishments to date have been impressive and have been achieved in the absence of an Electricity Law (the Law). Drafting the Law was a very important part of the ERACS project and was

accomplished by Mr. Robert Taylor, the DCOP, in close cooperation with Agency legal and other personnel. Other important aspects of the ERACS project that set the stage for TAPS dealt with:

- ◆ finalization of both the Benchmarking System and the License Management System;
- ◆ preparation of a Technical and Financial Compliance Report and Performance Measurement System;
- ◆ preparation of a Model Performance Agreement;
- ◆ preparation of a suggested Electricity Market Design;
- ◆ development of a Tariff Methodology and purchase, installation and training on a Tariff Model (also known as a Cost of Service Model);
- ◆ Training of Agency and Utility Company personnel as appropriate;
- ◆ development of draft Rules of Procedure and Secondary Regulations; and
- ◆ other related tasks.

Specific TAPS Tasks and accomplishments are presented in detail in the following sections.

IRG TEAM UPDATE

WORK PLANNING

TAPS was a firm fixed price contract comprised of 6 Milestones hereafter referred to as Tasks. A draft Work Plan (Task 1) was prepared by IRG and was issued to the Agency Managing Director and the USAID CTO (Mr. Mamdouh Raslan) on May 18, 2005 for review, comment and, ultimately, approval. Final, formal approval was received on June 15.

Work commenced on Tasks 2, 3 and 5 on May 21, 2005, well before Work Plan approval, with the arrival of Mr. Douglas Bowman in Cairo. Work was started on known and agreed to Tasks before approval of the Work Plan, in order to maintain the momentum established under ERACS. Details of this work are described fully in the following sections.

IRG commenced preparation of a Contract Modification request in June in accordance with the Agency's wishes. This Mod replaced Task 5—Charges Model Assessment—with an alternative Task 5. The Alternative provides hardware and software for integration of various financial models regarding tariffs, cost of service, financial planning, benchmarking, customer service, etc. which will enable more timely data submission to the Agency by all licensees. Negotiations of scope continued among the Agency, USAID and IRG through mid-September. A revised request was submitted by IRG on September 15, 2005 and it was agreed to by the Agency, IRG and USAID on September 20, 2005.

FINAL TASK/MILESTONE ACCOMPLISHMENTS

All Tasks delineated in the Contract and the Work Plan have been completed as of November 30, 2005 with the exception of Milestone 2. Each Task is addressed below. Formal concurrence of completion was provided via letter from the Agency Managing Director to the COP. All approval documentation was submitted to USAID along with each invoice.

TASK STATUS AND DELIVERABLES

Enclosure 2 is a CD that contains as many Project Deliverables as possible. Some Deliverables do not lend themselves to electronic copies, but all are in the possession of the Agency, USAID and IRG.

NOTE: Complete details of the work performed on all Tasks are contained in each consultant's Trip Report and each Monthly Report and Attachments thereto.

TASK #1: WORK PLAN.

Deliverable: Deliver Project Work Plan within one month of the start date of the project on May 9, 2005.

A draft Work Plan was completed by IRG and issued to the Agency, USAID and appropriate IRG personnel for review, comment and approval on May 18, 2005. The Agency and USAID approved it on June 7 and 15 respectively. It is included herein as Attachment A. Formal concurrence of Task 1 was received from the Agency and the invoice was submitted to USAID on two separate occasions. The invoice was paid on September 9, 2005.

TASK #2: FINALIZE COS MODEL, ETC.

Deliverable: Provide User's Manuals for generation, transmission and distribution and fully operational COS models for every licensee. Provide necessary training of Agency and licensee staff and a three-day seminar on tariff cases and tariff design. Preparation of a report entitled "Cost Classification and Allocation in COS Models".

Under TAPS, IRG finalized the cost of service models and prepared cost of service studies for each of the Power Pool Companies within the Egyptian Electric Holding Company (EEHC). In addition, cost of service studies were completed for each of the Power Pool Companies. The September report, Cost Classification and Allocation in Cost of Service Models, documented the primary methodologies used in the cost of service models to classify and allocate generation, transmission and distribution costs to customers.

The cost of service studies submitted to the Agency under this project are "final" only in the sense that they will no longer be modified by the consultants under this contract. Cost assignments and allocations can change over time as changes are made to the power sector structure, and as better cost assignment and allocation data become available. Assessing the cost of service is an evolving process that must be re-visited at

regular intervals. In this regard, the report recommends a number of data recovery and cost allocation techniques to improve the accuracy and fairness of the cost of service results in the future.

The Models were all thoroughly reviewed by Ms. Gajewski with Agency personnel in mid-September in Cairo. Necessary changes/revisions were made and all Models were issued in final form on CDs in October. All training on the models was completed at that time.

Mr. Bowman conducted the three-day workshop on Tariff Design on October 22, 23 and 24, during his final trip to Cairo.

TASK #3: REGULATORY PRACTICES ADVISORY SERVICES

Deliverable: Prepare and deliver: (1) A tariff Affordability Study; and (2) A Market Design Strategy Paper. Provide ongoing advice regarding the draft Electricity Law and various international best practices but only if specifically requested by the Agency.

AFFORDABILITY STUDY

In conjunction with Dr. Ebinger, a SOW and a Task Outline for the Affordability Study portion of this Task (subtask 3.1) were developed. Both were delivered to the Agency and their verbal approval was received on July 19, 2005. Data collection commenced in earnest in July by Dr. Ebinger and Dr. Ola Khagawa of Cairo University.

The affordability study assessed the ability of Egyptian customers to pay for electricity. The objective of the study was to provide information to assist the Agency and the Government of Egypt with policy decisions relating to electricity subsidies. This study assessed affordability by comparing Egyptian residential electricity bills at different consumption levels to residential electricity bills at the same consumption levels in comparable countries. The analysis utilized purchasing power parity (PPP) indices to enable comparison of bills among the different countries in a common currency (i.e., international dollars).

The study concluded:

- ◆ Subsidies to Residential electricity consumers are placing a huge financial burden on the Egyptian economy. The subsidy to the Residential class approaches LE 2 billion. This does not take into account the indirect subsidies provided to the power sector by the Government of Egypt through acceptance of a lower rate of return on Power Pool Company assets than would be acceptable to private sector investors (returns are negative for all Power Pool Companies but one), and by selling natural gas to power generating companies at less than opportunity costs. Accounting for these indirect subsidies could double the cost of the subsidy to the residential class.
- ◆ There is substantial cross-subsidization within the Residential customer class with low consumption residential customers being subsidized by high consumption residential customers.
- ◆ Over 90% of the consumption by Residential consumers is priced at tariffs that collect less than 50% of the cost of supply. Therefore, the subsidy is by no means targeting only the “poor” and “truly needy” customers.
- ◆ There is little justification for a six-block tariff structure for the residential customer class. There is no load research to suggest that the cost of supply varies by consumption level. The number of blocks should be reduced to three to improve customer understanding, reduce the costs of billing and settlement, improve cost recovery and send more efficient price signals to consumers. A three-block tariff structure allows continuance of a lifeline tariff for the poor.

- ◆ While protection of vulnerable populations is a common social objective, the level of subsidization currently provided to Egypt's poor exceeds that provided in comparable countries. The electricity bills of Egyptians consuming 50 and 100 kWh/month constitute far less of a burden than the monthly bills for similar consumption in Jordan, South Africa, Hungary, Algeria and Pakistan. Poor Egyptian consumers devote a much smaller share of their income to electricity bills than their peers in the five comparison countries.
- ◆ Doubling Egypt's residential tariffs for consumption up to 350 kWh/month would eliminate the cross-subsidy (but not the indirect subsidies provided by the Government). Per Exhibit 3-4 in Section 3, with tariffs doubled for consumption up to 350 kWh/month, Egyptian consumers' bills would still be lower than the country with the lowest electricity bills of the five-country peer group.
- ◆ Because the required tariff increase for the residential customer class is substantial, particularly at low consumption levels, it may be desirable to implement the increase over time. It is noted, however, that a recent EBRD study found "that delaying tariff reform by a few years tends to make little difference to affordability constraints, and may therefore not be an effective way to mitigate the social impact of utility reform."
- ◆ The timing and magnitude of tariff increases is a policy decision and cannot be done in isolation of tariff reform for other customer classes.

Flowing from these conclusions are two principal recommendations, as follows:

- ◆ Egypt should embark immediately on development of a comprehensive, time-bound tariff rationalization and subsidy policy covering all customer classes.
- ◆ There was a commitment in Egypt to increase electricity tariffs in October 2005 by 5%. IRG recommended that Egypt take this opportunity to reduce the subsidy provided to residential customers by applying the entire increase to the first three blocks of the residential tariff (this recommendation was not implemented). Increasing the tariffs for these three blocks by 15% would have generate approximately the same revenue increase as a 5% across the board increase to all customer classes. This approach would have maintained a substantial lifeline to the poor while alleviating a portion of the cross-subsidization in the tariff structure.

The Affordability Study was first delivered to the Agency and others on September 14 for their review and comment. Following inclusion of their comments, a revised version was submitted in early October. Both IRG and the Agency agreed on October 31 that the Affordability Study was complete.

MARKET DESIGN STRATEGY PAPER

Mr. Bowman commenced development of a detailed plan for the Market Design Strategy Paper (MDSP) portion of this Task (subtask 3.3) in June. Mr. Bowman and Ms. McKay prepared a SOW for this subtask in early August and obtained the Agency's concurrence at that time.

Mr. Bowman commenced research on Market Simulation Models that are available for lease in July. He was to have provided a short description of the capabilities, clients and pricing of available models from information available from websites, marketing documents, contacts and personal experience rather than direct contact with the vendor. However, the Agency decided this work was no longer necessary and it was stopped.

IRG worked closely with the Agency in developing the Market Design Strategy Paper, which proposed a staged approach to market implementation to allow time for Egypt to address existing institutional and technical constraints, and for industry stakeholders to gain experience with the new market, thus reducing the risks associated with market implementation. The long-term objective is a market model with full retail competition, legal separation of generation, transmission, distribution and supply functions, and a market

mechanism including a bilateral contracts market with bid-based balancing mechanism, and self-scheduling of generation facilities. This model is consistent with international best practices, and is proven and tested in Europe, and in parts of the United States (Texas and the Southwest Power Pool). For these reasons, it represents an ideal market design for Egypt in the long-term given Egypt's proximity and desire to increase power trading with the European Union. Full details including the phased implementation of the proposed market are provided in the Market Design Strategy Paper of November 6, 2005. The Agency formally approved the completion of Task 3 on November 30.

At the request of Dr. Sobki, presentations not specifically required by the TO or Work Plan were developed and delivered to the Board as follows:

- Presentation by Messrs. Bowman and Brown on May 24 regarding the “Market Options Including Power Pool” Report produced under the ERACS Project.
- Presentation by Mr. Brown on July 19 regarding the “New Capacity Planning” Report produced under the ERACS Project.
- Presentation by Mr. Brown on August 30 regarding the progress and status of the two TAPS Task 3 sub-tasks: Affordability Study and Market Design Strategy Paper.
- Presentation by Messrs. Bowman and Brown and Ms. Gajewski on the progress and status of the COS Models and the Affordability Study.
- Presentations on the Affordability Study and the Market Design Strategy Paper were prepared by Mr. Bowman in October. Both were made to Agency personnel but were not made to the Board due to time constraints.

These and all other presentations developed during the Project are included on Enclosure 3 hereto.

TASK #4: TWINNING ARRANGEMENT

Deliverable: Plan, organize and conduct a Twinning Exchange for up to 15 Agency staff for up to 6 days.

With Dr. Sobki's concurrence, the electricity regulators in Hungary, Italy and Turkey were contacted by the COP in July regarding hosting the Twinning Exchange. The Hungarian Regulator, known as the Hungarian Energy Office (HEO), located in Budapest, agreed to host the Exchange during early October 2005. Hungary was always the favored venue owing to its excellent regulatory regime and also because a visit can be made to the European Regulator's Regional Association (ERRA) which is also located in Budapest.

Prior to the Twinning Exchange to Budapest, Dr. Sobki indicated an interest in joining the Energy Regional Regulator's Association (ERRA). While in Budapest, the Egyptian delegation received a presentation on details of ERRA. Mr. Brown obtained the application form for Associate Membership and provided it to Dr. Sobki. Dr. Sobki completed the application on October 30 and it has been forwarded to ERRA for consideration by the Presidium in late November.

A preliminary Agenda was forwarded to the HEO for its review and comment in August. After several iterations, the Agenda was approved by all parties in early October.

The procedure for procurement of Hungarian visas for the Egyptian attendees was determined in August and the visa procurement process began on September 22 with the submission of all required documentation for the 15 Agency attendees, to the Hungarian Consulate in Cairo. All visas were granted in early October.

The Exchange visit was conducted from October 11 through October 18 in Budapest. Mr. Brown submitted his Report on the visit to the Agency and other interested parties on October 25. Dr. Sobki formally concurred that Task 4 was complete. It was invoiced on October 31.

TASK #5: EQUIPMENT PROCUREMENT FOR REGULATORY AGENCY

Deliverable: Deliver hardware and software to the Agency in accordance with equipment specifications prepared by the Agency and not to exceed \$23,000.00.

The original Task 5 was entitled “Assessment of Charges Model”. At the request of the Agency, this Task was replaced by “Equipment Procurement for Regulatory Agency” via Contract Modification No. 1. Specifications for all hardware and software were received from the Agency in late September and all purchase orders were issued to the vendor on October 18. Delivery of the equipment occurred on October 29 and 31 and Dr. Sobki formally approved completion of Task 5 on October 31. It was invoiced on the same day.

TASK #6: CUSTOMER SERVICE

Deliverables: Assessment of the capacity of licensees to collect and deliver customer service information to the Agency. Recommendations related to the establishment of a Customer Services Unit within the Agency and the Agency’s role in establishing call centers within licensees, including training of Agency personnel and other personnel as identified by the Agency. A visit to a relevant country to further study how regulatory agencies handle customer service issues (to be included with the Study Tour described in Task 4). Agency’s data base (including hardware and software) is augmented and upgraded to allow the Agency to fully monitor customer service issues, subject to budget constraints.

The lead IRG consultant for this Task, Ms. Chrys Wilson commenced work in June while in the US. She reviewed the voluminous information already received on customer service by Agency staff, put together a preliminary work plan and commenced researching information on typical regulatory agency call centers around the world.

In Cairo in July Ms. Wilson provided a presentation to about 10 Agency counterparts regarding the organization and operation of a customer service unit and a customer service call center. In this regard, Ms. Wilson and her counterparts drafted and issued an “operations manual”, for review and comment. Ms. Wilson and her Agency counterparts also issued a Report on August 28 regarding all work accomplished, including recommendations for the future, for review and comment. All comments were integrated and both documents were delivered to the Agency on October 24. Dr. Sobki provided formal written concurrence with the completion of this Task on October 31.

RECOMMENDATIONS FOR FUTURE ASSISTANCE

Dr. Sobki and Mr. Brown met with four World Bank representatives. They were: Mr. Eric Groom, Senior Regulatory Specialist, Mr. Grayson Heffner, Consultant, Anna Bjerde, Senior Infrastructure Specialist and Mr. Pierre Audinet, Senior Energy Economist. The main purpose was to discuss energy efficiency in Egypt both past and future. The Bank representatives were also interested in Dr. Sobki's needs once TAPS ends and are apparently considering funding assistance. Mr. Brown briefed them on all IRG work with the Agency and gave them his thoughts on future needs. Mr. Brown also met with Messrs. Groom and Heffner two more times (with Mr. Bowman and Ms. Gajewski present once) to continue the "Agency needs" discussion. Mr. Groom noted that the Bank was assessing the needs of Egypt and looking at what they can do to help. This was the fourth such Bank Mission this year.

While Dr. Sobki, the USAID CTO and Mr. Brown all recognize that the Agency's accomplishments to date have been truly impressive, there is much more assistance that could be provided as the Electricity Law, Market Design, Tariff Design, etc. work proceeds. Priority issues to be addressed in moving the Agency forward are¹:

- ◆ the enactment of the draft Electricity Law which will define the future roles of the Agency, the Ministry and the EEHC in the electricity sector, specifically as they relate to issues such as independence of the regulator and tariff setting responsibility to ensure that all costs are covered;
- ◆ monitoring and enforcing improved performance within the individual electric companies;
- ◆ vigorous pursuit of a modern and efficient electricity market in concert with recommendations made for development and implementation of such a market by IRG;
- ◆ redesign of subsidies to ensure only that truly needy customers receive subsidies;
- ◆ on-call technical assistance to assist the Agency, as necessary, with maintenance of the Cost of Service model; funds for license renewal and a study of appropriate fossil fuel pricing were also mentioned;
- ◆ targeted training on specific aspects of tariff design, performance benchmarking, affordability, and market design issues;
- ◆ hardware procurement to establish electronic data exchange linkages between the Agency and all licensees; and
- ◆ the division of responsibilities between all three entities related to planning, development, restructuring and attracting new market entrants.

It is forecast that Egypt's electricity consumption will increase dramatically during the next decade. The associated increase in capacity will serve Egypt's increasing population and expanding economy. It is extremely important that the Electricity Law, the Electricity Market Design, the establishment of a Tariff Methodology that guarantees the recovery of all costs, redesigning the electricity subsidies and the presence of an effective and efficient regulatory regime be in place to attract the necessary capital to fuel sector expansion.

¹ Please note that a more complete and detailed listing of future work tasks, in IRG's opinion, was delivered to the Agency and the CTO in September 2005.

TASKS COMPLETED

TASK 1: WORK PLAN.

Completed.

TASK 2

Completed, approved by the Agency December 15, 2005.

TASK 3: REGULATORY PRACTICES ADVISORY SERVICES

Completed, approved by the Agency on November 30, 2005.

TASK 4: TWINNING ARRANGEMENTS

Completed, approved by the Agency on October 31, 2005.

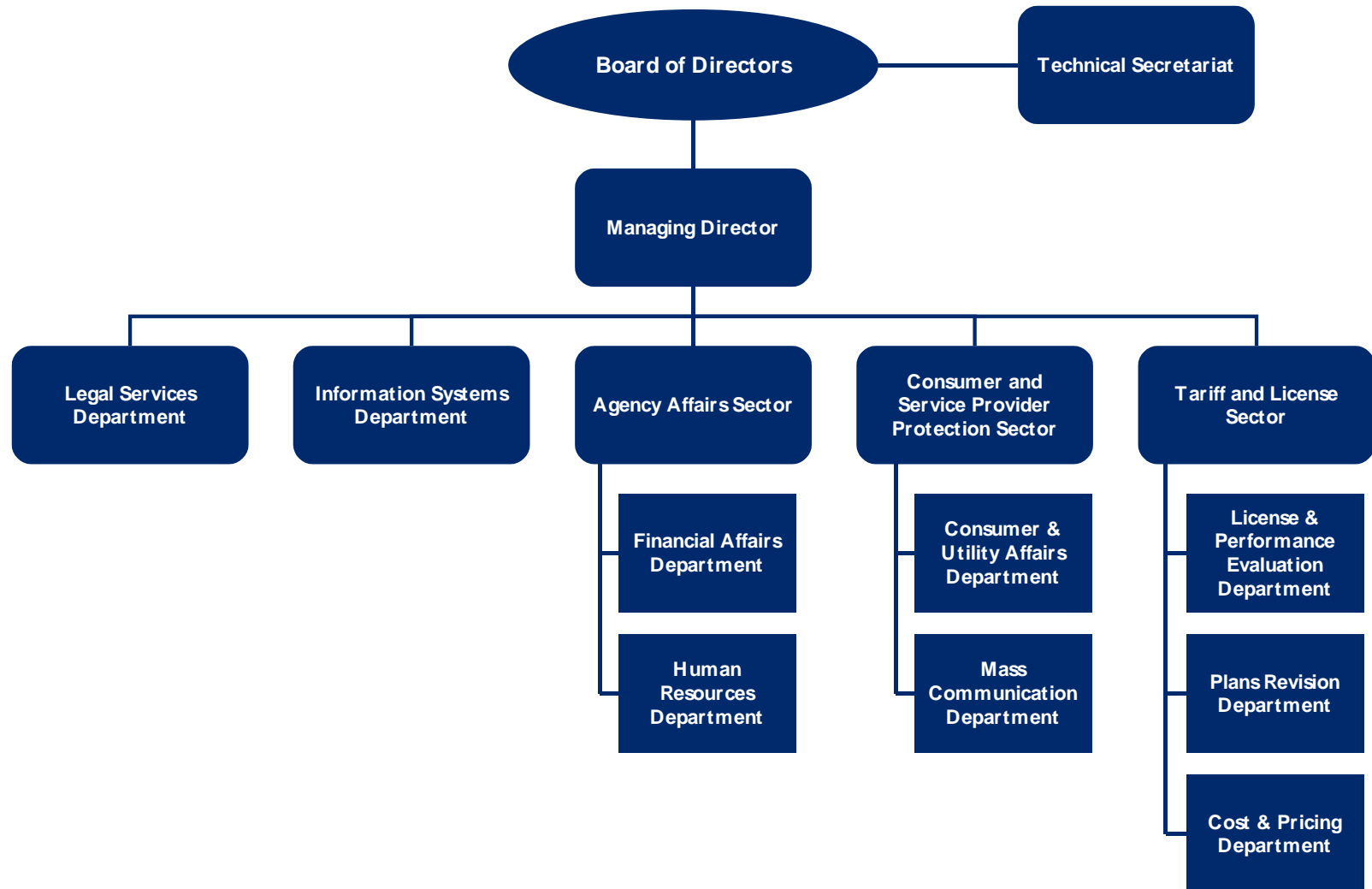
TASK 5: EQUIPMENT PROCUREMENT

Completed, approved by the Agency on October 31, 2005.

TASK 6: CUSTOMER SERVICE

Completed, approved by the Agency on October 31, 2005.

APPENDIX A: ERA ORGANIZATION CHART



APPENDIX B: IRG SHORT TERM CONSULTANTS

US Consultants/tasks*	Egyptian Consultants/tasks*
<p>Mr. Douglas Bowman, IRG Tasks 2, 3 and 5</p> <p>Dr. Charles Ebinger, IRG Program Manager Tasks 1-6</p> <p>Ms. Debbie Gajewski, Management Applications Consultants Task 2 and 3</p> <p>Ms. Margaret McKay, IRG Tasks 1-6</p> <p>Ms. Mary Clark Webster, IRG Tasks 1 and 6</p> <p>Ms. Chrys Wilson, IRG Task 6</p>	<p>Mr. Mohsen Alishmoni, Progress 2 Tasks 1 and 4</p> <p>Dr. Ola El Khawaga, IRG/Cairo University Task 3</p> <p>Mr. Mohamed Zaki, Progress 2 Task 4</p>

* For Tasks and Activities to be performed under each Milestone please refer to Enclosure 1: Final Work Plan.

ENCLOSURE I: FINAL WORK PLAN

TASK #I: WORK PLAN

TASK #I COMPLETION:

JUNE 9, 2005

- This Work Plan (“Work Plan”) is prepared pursuant to the agreement on Technical Assistance to the Power Sector in Egypt (Contract Number GS-10F-0067M), herein after referred to as the “TAPS Contract” concluded by USAID and IRG on May 9, 2005. It is designed to follow on and continue the work accomplished under the recently concluded Egyptian Regulatory Agency Consulting Services Project (“ERACS”). It has been prepared in consultation with:
 - the Egyptian Electric Utility and Consumer Protection Regulatory Agency (“the Agency”); and
 - USAID.
- The Work Plan, once approved will govern the fulfillment of Tasks 1-6.
- The TAPS Contract is a milestone contract in which the milestones are referred to as “Tasks”. This Work Plan will follow that convention. The TAPS Contract and this Work Plan specifically identify each Task, major Activities comprised in that task, and Deliverables that completion of the Activities will produce.
- This Work Plan also recognizes that during the course of this Project the Agency’s requirements and priorities may change. IRG will work with the Agency to refine the Activities that may be required to fully accomplish each Task. Both the Agency and IRG understand that although the Activities may be adjusted within the framework of the existing contract, Deliverables may not be changed in the absence of approval of USAID and the Agency.
- IRG will provide the Agency with the CVs of all IRG Team members involved in the extension.
- Deliverables:
 - Under each Task IRG is contractually required to submit Deliverables to the Agency and to USAID. The Agency’s acceptance of such Deliverables will establish contract compliance. The description of Deliverables and the narratives found under each box in this Work Plan reflect the common agreement of the Agency, IRG and USAID regarding the nature of the Tasks and the work required to fulfill them. The narrative descriptions below each box describe Activities and tie those Activities to specific Deliverables and the Performance Schedule.
 - All deliverables shall be prepared in collaboration with the Agency staff. The Agency will assign members of its staff to work closely with the IRG team.
 - All deliverables shall be presented to the Agency staff in formal presentations as an integral part of the deliverables.
- Reporting:
 - IRG will submit to USAID, and the Agency the following reports:
 - Monthly status reports;
 - Quarterly summary reports; and

- Project Completion report.
- The reports described in sub-paragraph (a) will track results in accordance with the relevant USAID/Egypt Strategic Objective, Intermediate Results and results indicators.
- IRG will continue to monitor and report on international developments related to the work undertaken in this Work Plan.
- This Work Plan has been approved by the Agency on June 8, 2005 and by USAID on June 14, 2005.

TASK #2: FINALIZE THE COS MODEL AND PREPARE COST OF SERVICE (COS) STUDIES FOR ALL LICENSEES

TASK #2 COMPLETION:

SEPTEMBER 30, 2005

Lead:	<ul style="list-style-type: none"> IRG: Douglas Bowman Agency: Dr. Hafez Elsalrawy
Team members	<ul style="list-style-type: none"> IRG: Debbie Gajewski, Russell Brown Agency: Ashraf Abdel Karim, Hisham Salah, Hossam Tantawy, Nada Allam, Safa Samy
Baseline:	<ul style="list-style-type: none"> Technical and financial data from FY 2003 COS model has been procured and is operational at the Agency Draft COS studies for Alexandria Distribution Company, the Transmission Company, and the 5 Generation Companies
Activities:	<ul style="list-style-type: none"> Data Recovery Strategy <ul style="list-style-type: none"> Define data requirements for completing cost of service models for all generation, transmission and distribution companies Define data requirements for refining cost of service study results Develop strategy for recovery of data during the term of this project Finalize cost of service models and user manuals <ul style="list-style-type: none"> Separate transmission and generation into two models Assist Agency with preparation of cost of service studies for all state-owned power companies plus four licensees that are not state-owned The completed models will be designed to suit data which shall ultimately be provided (when all data is finally available. It will be possible simply to insert that data into the model). Assist Agency with input of additional data collected under data recovery strategy Complete cost of service studies for state-owned companies and four licensees (i.e., revenue requirement, cost-based tariffs, subsidies) Deliver finalized cost of service models and manuals Define classification/allocation techniques and methodologies used in COS models <ul style="list-style-type: none"> Following finalization of the COS models, the methodologies used in the COS models to classify and allocate generation, transmission and distribution costs will be documented Recommend data recovery efforts to improve the accuracy and fairness of the COS results in the future Training on cost of service, tariff cases, tariff design <ul style="list-style-type: none"> Conduct training sessions for Agency on cost of service models to enable Agency staff to prepare studies on their own Tariff methodology guidance and cost of service (COS) model development Conduct seminars for Agency and other stakeholders on the cost of service methodology and results Advise and train Agency to develop and evaluate of rate cases
Deliverables:	<ul style="list-style-type: none"> Cost of Service Data Recovery Strategy Three (3) finalized cost of service models with completed cost of service studies for all state-owned companies and four licenses, along with user's manuals Classification/allocation techniques incorporated in COS models and recommendations to improve in the future Training materials
Results:	<ul style="list-style-type: none"> Agency will be able to run the COS models Agency will be able to prepare cost of service studies Agency will be better able to advise industry stakeholders on power supply costs and tariffs

Mr. Doug Bowman will continue to be IRG's lead expert for Task 2. MAC (Ms. Gajewski) will continue to conduct the COS model work. During Month 1, MAC will separate the transmission and distribution model into two separate models and make required changes to the model user's manuals. The models will be delivered to the Agency by the end of Month 1. In Month 2 Mr. Bowman and Ms. Gajewski will help the Agency to develop cost of service models for the remaining Distribution Companies and four private licensees, and integrate revised/updated data into the models. Training on the models will be provided to the Agency (for approximately one week) so that it can effectively incorporate revised/updated data and update the cost of service models going forward. The COS models for all generation, transmission and distribution companies are expected to be operational by the middle of Month 3.

Once the COS models are finalized, a report will be submitted that documents the classification and allocation techniques used in the COS models for generation, transmission and distribution costs. The report will describe the basis for each classification/allocation methodology, and recommend data recovery efforts to improve on these methodologies in the future. This report will be submitted by the end of Month 4.

During Months 4 and 5, after the best available data has been incorporated into the models, Mr. Bowman and Ms. Gajewski will train Agency staff and specifically identified stakeholders on the cost of service for the 19 licensees. The training will comprise, among other matters, revenue requirements for each company, subsidies required due to insufficient revenue and other cost of service study implications. This training will emphasize that only those costs related to the production and delivery of electricity to final consumers should be included in the cost of service analysis. The timing and duration of training sessions with Agency/stakeholders will be determined by the Agency and IRG Chief of Party.

Because cost of service analysis is a continuing process, it will require continual updating. For that reason, Mr. Bowman and Ms. Gajewski will undertake to ensure that Agency staff is fully able to revise the model as better data become available.

The final activities under Task 2 will provide high level, expert advice, as requested, by Mr. Bowman as well as other IRG experts. We will provide up to three days of presentations on the various aspects of tariff design and tariff case development. This work will be performed in Months 5 and 6.

TASK #3: REGULATORY PRACTICES ADVISORY SERVICES

TASK #3 COMPLETION:

JULY 31, 2005

Lead:	<ul style="list-style-type: none"> IRG: Charles Ebinger, Douglas Bowman Agency: Dr. M. Abdel-Rahman
Team members:	<ul style="list-style-type: none"> IRG: Robert Taylor, Mary Webster, Mohsen Alashmoni, Russell Brown, Michael Wilcox, Margaret McKay and an Economist to be determined for the affordability study Agency: Ahmed Mohsen, Ghada Helmy, Sherif Zoheir, Iman Mashour, Salma Hussein, Noha Mamdouh, Mai Youssry
Baseline:	<ul style="list-style-type: none"> The Draft Electricity Law has been prepared A "Report on Market Design for the Egyptian Power Sector", "New Capacity Rules for the Egyptian Power Sector Report", and "Report on Market Options Including Power Pool" have been developed and accepted by the Agency. Preliminary review of the Draft Grid Code.
Activities:	<ul style="list-style-type: none"> Affordability Study <ul style="list-style-type: none"> Preparation of an Affordability Study assessing the ability of customers to pay. Examine the relative affordability of Egyptian tariff rates to prevailing rates in regional and select developing countries. Best Practices Advice <ul style="list-style-type: none"> Specific responses to specific requests from the Agency, time and budget permitting. Market Design Strategy Paper <ul style="list-style-type: none"> Prepare a Market Design Strategy Paper that addresses subsidies, market rules development, market participant roles and responsibilities and organization of the system and market operator under the proposed electricity market design. The paper will provide the next steps in the Market Design process including the impacts of key parameters of the design on the sector and its customers. Time and budget permitting, the impacts will be described in a quantitative manner using a model tailored to the Egypt electricity market. Draft Electricity Law <ul style="list-style-type: none"> Provide legal expertise as required and requested by the Agency, time and budget permitting.
Deliverables:	<ul style="list-style-type: none"> Affordability Study Best Practices Advice—Specific Deliverables under this sub-task will be established on an "as required" basis by the Agency Market Design Strategy Paper Report with Commentary and recommendations on the Draft Electricity Law—Specific deliverables under this sub-task will be established on an "as required" basis by the Agency. Training materials as appropriate
Results:	<ul style="list-style-type: none"> The Agency will be better able to advise the Ministry on operation of the Sector.

AFFORDABILITY STUDY

The IRG will work closely with the Agency to prepare an affordability study that assesses the ability of customers to pay for electricity. The study will begin with an analysis of the burden and level of cross-subsidization within Egypt's residential tariff structure using the cost of service model purchased and installed under the ERACS Project. The burden and level of cross-subsidization will be identified at key consumption levels (i.e., 50 kWh, 100 kWh, 200 kWh, etc.) and affordability at each level will be assessed on the basis of Egyptian economic circumstances and international norms and benchmarks. If practicable and relevant, IRG will take into account prevailing tariffs in other regional and/or selected developing countries. This information will place the Agency in a strong position to identify those customers who should be targeted for subsidies.

This activity will be completed by Month 4.

BEST PRACTICE ADVICE

IRG will continue to provide advice to the Agency related to matters arising out of the ERACS Project, this TAPS Project, and regulatory matters generally. All advice will be pursuant to specific requests from the Agency and take into account international best regulatory practices and the specific needs of the Egyptian market.

MARKET DESIGN STRATEGY PAPER

On the basis of the work done in the ERACS Project (Market Design White Paper and Report on Market Options Including Power Pool for the Egyptian Power Sector), IRG will work with the Agency (and others pursuant to specific requests by the Agency) to develop an effective Market Design Strategy Paper. The strategy paper will be consistent with the long-term objectives of Egypt, particularly the Ministry's desire to attract private sector investment. The paper will refine and as necessary, expand the transitional market design model recommended by IRG in the ERACS project. The report will also recommend a strategy (including time frames) during which the Government can address the numerous important issues related to power sector restructuring. Specifically, the strategy paper will:

- Provide a method to identify and reduce subsidies. This will include an examination of such matters as current subsidy levels, recommendations to reduce those subsidies over time, targeted subsidies (i.e., how subsidies can be targeted to the truly needy), techniques the Government can use to transfer subsidies to targeted subsidy groups, and subsidy payments (i.e., direct Government transfers to target groups, Government transfers to power sector, cross-subsidization by other consumers).
- Provide a detailed discussion of the roles and responsibilities of each market participant group in the transitional market structure.
- Develop a detailed outline of Market Rules to govern transactions in the competitive, or free, component of the transitional market. Market rules usually provide guidance on such matters as institutional structure, commercial arrangements, billing and settlement, technical components of market transactions (i.e., data submissions, communications, etc.), market surveillance, penalties for violations, and conflict resolution. The outline will also comprise a list of documents the Agency should consider during its development of market rules, and a procedure/process the Agency can use to do so.
- Provide a detailed program for the establishment of a System/Market Operator. The System/Market Operator is responsible for transactions in the market, including billing and settlement, and ensuring market transparency while respecting confidentiality requirements. Because today there is no competitive market in Egypt, there is no entity within EEHC that currently carries out the tasks of the System/Market Operator (as mentioned in the proposed market design). For that reason it is necessary to “design” and establish a Market Operator to carry out these tasks. Under this program, IRG will deliver a System/Market Operator design comprising: organizational structure, staffing and their qualifications, the functions to be carried out by the System/Market Operator, and its methodologies, instruments, and procedures for carrying out these functions.
- The Market Design Report will include a quantitative economic impact assessment on the sector as a whole as well as on customers (relevant customer classes). The level of detail of this assessment will be limited by the project's time and budget constraints.
- Conduct training on all of the above matters.

DRAFT ELECTRICITY LAW

IRG will continue to provide legislative support to the Agency related to the Draft Electricity Law and all Rules and Secondary regulations submitted under the ERACS project and any additional legislative drafting that may be

required under the TAPS project. All deliverables under this sub-heading shall be pursuant to Agency request only. Deliverables under this activity will be limited by the project's time and budget constraints.

TASK #4: TWINNING ARRANGEMENT

TASK #4 COMPLETION:

OCTOBER 1, 2005

Lead:	<ul style="list-style-type: none"> • IRG: Russell Brown Agency: Dr. Mohamed Elsobki
Team members:	<ul style="list-style-type: none"> • IRG: Charles Ebinger, [Visa Expediter] • Agency: TBD
Baseline:	<ul style="list-style-type: none"> • Twinning with Massachusetts Department of Telecommunications and Energy • Three study tour exchanges in Egypt and America.
Activities:	<ul style="list-style-type: none"> • Organize and Conduct Twinning Exchange <ul style="list-style-type: none"> • Identify potential twinning candidates in the European and Mediterranean Region. • Establish twinning arrangement with a suitable organization. • Conduct a study tour which includes aspects of rate cases, customer service and autonomy.
Deliverables:	<ul style="list-style-type: none"> • Conduct Twinning Exchange • Reports identifying twinning candidates and results of the Exchange
Results:	<ul style="list-style-type: none"> • Agency participants have significantly increased understanding of how regulatory commissions function host country and the region • How lessons learned in the host country can be transferred to their daily decision-making

The Agency has expressed interest in establishing a twinning arrangement with a regulator in a Western European country or in a country with aspirations to join the European Union. IRG and the Agency will select the host on the basis of its similarity with Egypt's electricity sector and regulatory regime on matters such as the state of unbundling, tariff development, regulation, privatization and customer service. In order to allow adequate time for USAID participant training clearances, visa procurement, travel reservations and to confirm all arrangements with the hosting organization, the Agency and IRG agree to identify an appropriate twinning institution and the Agency's participants not later than July 15, 2005. The Agency and IRG agree that a fundamental characteristic of an appropriate twinning institution is that its top staffers and personnel are willing to donate their time to transfer experiences and market-based "best practices" to the Agency.

Pursuant to budget restraints, a visit or visits to the twinning partner(s) will be conducted for up to fifteen (15) members of the Agency's staff. The number of Agency participants plus one IRG coordinator and the duration of the visit will be governed by the budget for Task 4 as established in the TAPS Task Order. The exchange visit will comprise formal and informal presentations and discussions addressing regulatory issues relevant to Egypt, including regulatory independence, customer service, rate setting and tariffs, licensing, staff development, legal and regulatory framework, power pool regulation, information management, market design, and dispute resolution.

TASK #5: ASSESSMENT OF CHARGES MODEL

TASK #5 COMPLETION:

JUNE 30, 2005

NOTE: This Task cancelled per Contract Mod No. 1. See Alternative Task 5 below.

Lead:	<ul style="list-style-type: none"> • IRG: Douglas Bowman Agency: Eng. Elsayed Mansour
Team members:	<ul style="list-style-type: none"> • IRG: Russell Brown • Agency: Mohamed Amer, Amr Ryan, Ranya Fahmy
Baseline:	<ul style="list-style-type: none"> • The Charges Model is operated by EEHC. Agency access to the Charges Model has not yet been granted. Assessment of Charges Model in Report on Market Options including Power Pool
Activities:	<ul style="list-style-type: none"> • Presentation to Agency on Charges Model • Review Charges Model data and information inputs. • Deliver a presentation on the role and purpose of the model, data inputs and assessment of model as compared to the Agency's cost of service model.
Deliverables:	<ul style="list-style-type: none"> • Presentation to Agency on the Charges Model
Results:	<ul style="list-style-type: none"> • The Agency becomes better informed about the relative capabilities of the Charges Model and EEHC, and is in a better position to promote the merits of its cost of service model

The "Charges Model" was developed by others to determine payments between the state-owned Electricity Companies participating in the Egyptian Power Pool. The model controls internal pricing among the electricity companies. Both the model and the companies it affects are controlled by the Holding Company. The model accommodates current shortcomings in tariffs and collections. Under the model, each company's profit is set at the profit of the power sector as a whole.

The Agency now has a functional cost of service model developed under the previous ERACS Project. The Agency's cost of service model is much more comprehensive than the Charges Model. It develops cost-based tariffs for each of the Power Pool Companies and each retail customer class, while at the same time avoiding the problems posed by the Charges Model (it is a disincentive to competition and all companies are financially linked, and not independent) and to efficient licensee performance (all companies receive the same return regardless of performance). The Agency is required by its Decree to improve performance, competition and reduce subsidies. The Charges Model therefore functions in direct opposition to each of these obligations. Finally, because the model is contrary to the long-term goals for the power sector, it is of direct relevance and immediate concern to the Agency. For all of these reasons the Agency should have a working knowledge of the Charges Model in order to understand how it fits in the current regime, and to be in a position to support the relative merits of its cost of service model. Mr. Bowman will conduct a ½ day workshop on the purpose and process of the Charges Model and its shortcomings as compared to the cost of service model during Month 2 of the project.

ALTERNATIVE TASK #5: EQUIPMENT PROCUREMENT FOR REGULATORY AGENCY

TASK 5 COMPLETION:

AUGUST 31, 2005

The Agency and IRG agree that if access to the latest version of the charges model is not possible or if it is discovered that the charges model is of little value, the resources currently allocated to this Task should be redirected to (i) hardware procurement, (ii) specialty software identified by the Agency. Items (i) and (ii) refer to procurement of hardware and software, along with limited technical assistance related to IT equipment that will enable the Agency to better integrate and manipulate the various financial models and databases.

Lead:	<ul style="list-style-type: none"> • IRG: Russell Brown Agency: Eng. Elsayed Mansour
Team members:	<ul style="list-style-type: none"> • IRG: Local Consultant(s) by IRG in consultations between Russell Brown and Dr. Sobki • Agency: Mohamed Amer, Amr Ryan, Ranya Fahmy
Baseline:	<ul style="list-style-type: none"> • Agreement by the Agency and IRG that it will be impossible to gain access to Charges Model or that further work on the charges model would be a waste of project resources.
Activities:	<ul style="list-style-type: none"> • The Agency and IRG identify appropriate hardware and software to enable the Agency to integrate the exchange of financial data between the Agency and its licensees the various financial models and databases such as the Benchmarking Tool, the COS Model and Financial Planning Model • IRG and the Agency procure the agreed upon hardware and software pursuant to USAID procurement policies. • Hardware and Software are installed and training as necessary is conducted.
Deliverables:	<ul style="list-style-type: none"> • New hardware and software installed and in operation.
Results:	<ul style="list-style-type: none"> • The Agency's ability to integrate and manipulate aspects of the various financial models and databases increased. • The Agency will be better able to effect licensee performance improvement and to make tariff and rate recommendations.

TASK #6: CUSTOMER SERVICE

TASK #6 COMPLETION:

SEPTEMBER 30, 2005

Lead:	<ul style="list-style-type: none"> IRG: Chrys Wilson Agency: Mr. Salah Abdou
Team members:	<ul style="list-style-type: none"> IRG: Mary Webster, Robert Taylor, Charles Ebinger, Russell Brown, Margaret McKay Agency: Amr El-rakhawy, Iman Bahgat, Salwa Abdel-Rashid, Ranya Abdel-Wahid, Ranya Azzab, Maha Abaido
Baseline:	<ul style="list-style-type: none"> The ERACS project conducted a Customer Service Needs Assessment. The ERACS project submitted a Customer Services Charter as a part of the Agency's secondary regulations. The ERACS project developed Key customer service-related performance indicators
Activities:	<ul style="list-style-type: none"> Establish Agency's capacity to measure and track customer feedback on licensee performance to be integrated with existing databases. Site Visit to another relevant country. Conduct training, seminars and presentations, in response to specific requests from the Agency as required. Seminars to be delivered to the Agency and other stakeholders identified by the Agency to improve the Agency's capacity to monitor licensee customer service practices and results. Augment Agency Database subject to budget constraints.
Deliverables:	<ul style="list-style-type: none"> Assessment of the capacity of licensees to collect and deliver customer service information to the Agency. Recommendations related to the establishment of a Customer Services Unit within the Agency and the Agency's role in establishing call centers within licensees, including training of Agency personnel and other personnel as identified by the Agency. A visit to a relevant country to further study how regulatory agencies handle customer service issues (to be included with the Study Tour described in Task 4). Agency's data base (including hardware and software) is augmented and upgraded to allow the Agency to fully monitor customer service issues, subject to budget constraints.
Results:	<ul style="list-style-type: none"> The Agency is capacity to monitor and report on customer services issues for all licensees is augmented.

Under Presidential Decree 339/2000 the Agency is obligated to oversee customer service issues arising between customers and licensees. Presently, the institutionalized approach to resolving customer service issues is described in the licenses. Each licensee is required to file a customer service plan for approval by the Agency. The Agency now requires a policy to address customer service issues and to resolve customer service complaints. The Agency also requires a compliance mechanism that will improve the licensees' ability to effectively address customer service issues.

The Agency obtained valuable information on the functioning of a customer service department in twinning program with the Massachusetts Department of Telecommunications and Energy and the Washington, DC Public Service Commission. In addition, IRG conducted a customer service needs assessment under the ERACS project. Now, the Agency is in a position to implement the best practices it has studied.

Addressing customer service issues arising between licensees and customers is a two-step process. In the first step the Agency needs a comprehensive understanding of the issues that are arising between Egyptian licensees and their customers. After a capacity assessment has been completed, the Agency will be in a better position to develop a plan to address those needs.

Mesdames Mary Webster and Chrys Wilson will:

- Assist the Agency to assess the capacity of licensees to gather customer service related information from its customers and to deliver such information to the Agency.
- Make recommendations to the Agency regarding organization, staffing, functions, duties and responsibilities of the Agency's customer service unit, and train Agency personnel and (as identified by the Agency) other relevant entities.
- Assist the Agency to establish a customer call center within the Agency that will enable customers to file complaints, obtain information, resolve disputes between customers and licensees
- Advise the Agency regarding its role in developing licensee call centers and of the utility of establishing a hot line for customers to report service interruptions.
- Within the ambit of the study tour described in Task 4, provide specific training to specifically identified Agency personnel on customer service matters.

IRG recognizes that the Agency has specifically requested the installation of a Customer Service call center within this budget. The establishment of such a call center would be the logical conclusion of all of the customer service related technical assistance provided under the ERACS project and this TAPS project. However, both IRG and the Agency recognize that IRG's ability to comply with this request is subject to available resources and procurement approval from USAID.

Technical Assistance to Power Sector in Egypt Performance Schedule

		Task Lead, Task Experts	May 1	June 2	July 3	Aug 4	Sept 5	Oct 6
Task 1: Work plan								
	Preparation, in consultation with the Agency, The Ministry and USAID							
	Delivery of work plan, in Arabic and English	Brown, Taylor, Bowman, Ebinger, Webster						
Task 2: Finalize the Tariff Model and Prepare the Cost of Service (COS) Studies for All Licensees								
2.1	Separate Transmission and Generation into 2 Discrete Models; finalize manual; conduct Training in Cairo	Gajewski, Bowman						
2.2	Populate Distribution Models for Remaining Distribution Companies	Agency staff						
2.3	Obtain updated, more detailed data for Alexandria distribution company	Bowman, Gajewski						
2.4	Refine data in model for Alexandria distribution company	Gajewski						
2.5	Present revised results of Alexandria distribution company model	Bowman						
	Tariff Model fully operational for all generation, transmission & distribution companies & manual finalized							
2.6	Identify and prioritize a list of outstanding data requirements for the COS model	Bowman						
2.7	Establish time-bound action plan for recovery and development of the outstanding data	Bowman						
	Gathering of missing data and inputting into model, and preparation of data collection report							
2.8	COS studies for 5 state-owned gen. co.'s, transmission co., 9 distribution co.'s, & 4/ 8 remaining co.'s	Bowman						
2.9	Calculate revenue requirements, subsidy requirements and full cost of service tariffs for all licensees	Bowman						
2.10	Conduct training, seminars & presentations for stakeholders on methodology / results of COS studies	Bowman, Gajewski						
2.11	Advise Agency on developing and evaluating rate cases	Bowman, Brown						

Technical Assistance to Power Sector in Egypt Performance Schedule (continued)

		Task Lead, Task Experts	May 1	June 2	July 3	Aug 4	Sept 5	Oct 6
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